

VIRTUAL QUEUE FOR NETWORK BANDWIDTH
ALLOCATION TRAFFIC-SHAPING CELL

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ABSTRACT OF THE DISCLOSURE

A method and a semiconductor intellectual property
embodiment of the present invention comprise a class-based
queue traffic shaper that enforces multiple service-level
10 agreement policies on individual connection sessions by
limiting the maximum data throughput for each connection.
The class-based queue traffic shaper distinguishes amongst
datapackets according to their respective source and/or
destination IP-addresses. All limit checking is done in one
15 clock cycle for the entire network hierarchy above a
particular node, and previously independent and separate
queues are combined into one super queue.